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To
 AFQ Inspectors
 SG Specialist Inspectors (Mech, Occ Hyg)
 SG Medical and Occupational Health Inspectors
 Railway Inspectors
 Workplace Contact Officers
 TD6 Inspectors
 HID Inspectors

CONTROL OF LEGIONELLA: INVESTIGATION OF OUTBREAKS (AND SINGLE CASES) OF LEGIONELLOSIS FROM WATER SYSTEMS INCORPORATING COOLING TOWERS AND EVAPORATIVE CONDENSERS

This OC revises and replaces OC 255/8. It provides guidance for inspectors involved in the investigation of outbreaks and single cases of legionellosis from water systems incorporating cooling towers and evaporative condensers. [OC 255/9](#) *Legionellosis: routine inspection of water systems incorporating cooling towers and evaporative condensers*, is also relevant.

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BACKGROUND

1 *Legionella* is the genus of bacteria, which gives rise to the risk of infection from diseases, collectively known as legionellosis. These consist of both pneumonias and non-pneumonic varieties. The species *Legionella pneumophila* presents the most serious hazard, which is mainly, but not solely, responsible for causing legionnaires' disease. This is a pneumonia which has serious effects and is fatal in 10-12% of cases. *Legionella* is widespread in both natural water sources and artificial water systems. It proliferates where temperatures are favourable (20-45⁰C), nutrients available and water is stagnant or recirculates. Infection can then occur by the inhalation of aerosols or particles generated from the source.

2 Water systems incorporating cooling towers and evaporative condensers (henceforth referred to as wet cooling systems) pose particular problems in relation to the management of the risk. This is because their mode of operation can both produce ideal conditions for microbial growth and deliberately create sprays and aerosols, which can be dispersed over a wide area if not controlled properly. Those at risk of exposure include not only those who work in the premises where they are installed, but also others in the vicinity, including members of the public.

3 On average there are approximately 200-250 reported cases of legionnaires' disease each year in the UK, of which about half are associated with travel abroad. The other half are primarily associated with infection from wet cooling or hot and cold water systems, but other types of water systems have been implicated, while in many cases the source is never identified.

OUTBREAK DEFINITION AND SCOPE OF THIS OC

4 The Public Health Laboratory Service (PHLS) defines an outbreak as 2 or more diagnosed cases of legionellosis linked by locality and proximity in time (generally within 6 months) for which there is strong epidemiological evidence of a common source of infection, with or without microbiological evidence. The definition of 'locality' requires a degree of judgement in terms of the geographical proximity of the cases.

5 This OC specifically provides guidance for conducting investigations into outbreaks and single cases associated with wet cooling systems, because it is these which pose most difficulties and can be the most demanding of HSE's resources. However, some of the information may also assist in the investigation of outbreaks from other sources. It is recommended that FOD divisional and HID field unit emergency plans should refer to this OC for guidance on HSE's role during an outbreak.

LEGISLATION

Health and safety

6 Duties under the HSW Act extend to risks from *legionella* arising from work activities. In addition, harmful micro-organisms (biological agents) are subject to the Control of Substances Hazardous to Health Regulations 1999 (COSHH), meaning that the requirements to carry out a risk assessment, and to prevent, or adequately control exposure etc apply to risks created by the *legionella* bacteria. An assessment needs to take into account all persons likely to be exposed, including employees and members of the public, especially those who may be particularly susceptible to infection. The Management of Health and Safety at Work Regulations 1999 (MHSWR) are also important with respect to management arrangements.

7 The Approved Code of Practice (ACoP) (L8) *Legionnaires' disease: the control of legionella bacteria in water systems* (file 255) provides a basic framework for preventing outbreaks of the disease, giving advice on the requirements of HSW Act, COSHH and MHSWR. In its third (2000) edition this document was combined with the technical guidance formerly given in HSE guidance booklet HS(G)70 *The control of legionellosis including legionnaires' disease*, which is now no longer published separately (see [OC 255/11](#) for further details). The ACoP places responsibility on employers to:

- 1) identify and assess risks from *legionella*;
- 2) manage the risks, including the appointment of a person, or persons, to take managerial responsibility and to provide supervision and training of personnel;
- 3) avoid the use of systems that give rise to a reasonably foreseeable risk of *legionella* or, where this is not reasonably practicable, prepare a written scheme for minimising the risk from exposure;
- 4) implement, manage and monitor the scheme of precautions; and
- 5) keep appropriate records.

The ACoP also sets out the responsibilities of manufacturers, importers, suppliers and installers of products and services.

Notification requirements (NCTEC Regulations)

8 Occupiers have a duty under The Notification of Cooling Towers and Evaporative Condensers Regulations 1992 (NCTEC Regulations) to notify the local authority (LA) in writing of details of 'notifiable devices'. These comprise cooling towers and evaporative condensers, except where they contain no water that is exposed to air and/or their water or electricity supply is not connected. The requirement is to notify the LA, although the Regulations are enforced by the relevant enforcing authority for the premises with the notifiable device.

9 The main purpose of such requirements is to assist in investigating outbreaks. There is no obligation for LAs to maintain a register, although in many cases they will do so and it is expected that, whatever the form in which the information is collated, it will be made readily available to HSE inspectors.

Public health

10 The Environmental Protection Act 1990 (EPA) allows LAs to deal with 'any dust, smell or other effluvia arising on ... premises and being prejudicial to health or a nuisance', which includes pathogenic organisms within its scope. It gives them the powers to issue 'abatement notices', allowing 20 days for compliance. There is no onus on the LA to prove the existence of the substance prejudicial to health or nuisance by sampling, but environmental health officers (EHOs) are allowed to enter premises and take samples, regardless of whether they are enforced by HSE or the LA under health and safety legislation. There is a right of appeal against the notice but it does not have to be suspended while the appeal is being considered, if this is not thought to be to the public benefit. If the notice is not complied with, the LA may pursue its own action to deal with the problem and reclaim costs later.

11 Legislation arising from a number of public health acts gives various powers to assist the control of outbreaks of infection. However, the archaic nature of some of the legislative requirements can lead to differing and possibly confusing legal interpretations. In England and Wales, experience indicates that these are unlikely to be invoked for outbreaks of legionellosis, so in practice they do not have to be considered. Because of the notifiable status of the disease in Scotland, in theory, greater powers are available, notably for LAs to issue notices to require disinfection and cleansing, with follow-up powers to carry it out themselves if compliance is not met (the Public Health (Control of Disease) Act 1984). However, even here it seems that these powers are rarely used in practice for cases of legionellosis.

TRAINING AND HEALTH AND SAFETY

12 Before proceeding with inspection for all types of installations, inspectors must read and be familiar with the FOD Health and Safety Policy Supplement No 30 *Legionellosis* (this document is also an integral part of the HID Health and Safety Policy). This requires that inspectors receive formal training before undertaking any physical examination of a cooling tower or evaporative condenser, or investigating a legionellosis outbreak/single case whatever the source. This training is also important to assist inspectors in identifying key issues for inspection. It can be obtained from the FOD [Control of legionella: inspection of water systems](#) course. It is recommended that each divisional development manager maintains a register of trained inspectors for their division, so that they can be readily identified during an investigation (see [para 29](#)).

OUTBREAK - NOTIFICATION AND DECLARATION

13 Legionellosis is not a notifiable disease in England and Wales but is in Scotland. In practice, an informal system of notification operates between the microbiological laboratory confirming the diagnosis and the consultant in communicable disease control (CCDC), who is employed by the health authority. In Scotland this may operate in addition to the formal notification system. The CCDC will, therefore, receive information in almost all cases. The information will then be passed to the 'proper officer' (PO) (see [para 18](#)), although in most cases this will be the same person as the CCDC. The PO will then make a decision on whether an outbreak should be declared. It is unlikely that HSE will have any influence over this.

14 No formal procedure exists to notify HSE of an outbreak, but a decision to involve HSE in the investigation should be made if any of the premises likely to be the source come under their enforcing authority. As cases of legionellosis attributable to particular work sources are required to be reported under RIDDOR 1995 (see Schedule 3, item 19), it is possible that HSE may be notified of individual cases which contribute to the outbreak through this route. Even if HSE is not involved as the enforcing authority, it may be that an LA requests specialist HSE assistance for investigations

involving their enforced premises. This would normally be routed through the ELO.

15 If only one case is diagnosed, a number of courses of action may follow. For those occurring in hospitals, it will be thoroughly investigated, because of the potential risk to immuno-suppressed patients. For those with a suspected occupational source, the enforcing authorities are more than likely to be involved (see [paras 51-55](#)). In other cases it is possible that no action will be taken as it may be extremely difficult to identify the source.

16 Because of the notifiable status of the disease in Scotland, an 'incident control team' may be convened on the basis of a single case. Their investigations may subsequently reveal common factors with other cases which may not have readily fitted the criteria of an outbreak because of a lack of an obvious geographical or temporal link. Similarly, but over a longer term, it is possible that links between isolated cases, which were not immediately apparent, may be identified by NHS regional consultant epidemiologists.

THE OUTBREAK COMMITTEE

17 Once an outbreak has been declared, an outbreak committee is convened (other terms may be used such as 'control of outbreak team' or 'incident management team'). The primary purposes of an outbreak committee are to protect public health and prevent further infection. To achieve this, its aim is to identify the source and control the risk from that source.

18 The key figure in the investigation of any outbreak of a communicable disease is the PO appointed by the LA under the Public Health (Control of Disease) Act 1984 and the Public Health (Infectious Diseases) Regulations 1988. In Scotland, this is the Consultant in Public Health Medicine (CPHM) employed by the Health Board. In most cases the PO/CPHM will be a CCDC. Local authorities have established incident plans to investigate outbreaks of infectious disease including legionellosis, which are activated by the PO who will convene the outbreak committee. In Scotland, LAs have jointly established outbreak control plans with the Health Board.

19 As well as the PO/CPHM, the outbreak committee will include other professionals from the health authorities, the Public Health Laboratory Service (PHLS), Communicable Disease Surveillance Centre (CDSC) and the LAs. Where the PO/CPHM is not a CCDC, another member of the committee will be. The PHLS may have had a prior role in confirming the microbiological diagnosis of the disease.

20 If HSE is the enforcing authority for any of the premises suspected of being the source, the PO/CPHM should invite HSE to join the committee of investigation by the PO/CPHM. It is important to understand that this figure has control of the outbreak investigation. HSE will pursue compliance with health and safety legislation to fulfil its part of the investigation, but this should run in parallel with that of the PO/CPHM, who will have the lead as a whole, and HSE must maintain close liaison with the PO/CPHM, feeding back into the committee. The PO/CPHM should outline the contribution of the various parties to the outbreak committee at the convening meeting of the committee (see [appendix](#)).

21 HSE inspectors attending outbreak control meetings should be represented by band 2 level (PI) or above. They should have the necessary authority to make strategy decisions on the spot and have the expertise to advise the medical members of the committee regarding technical and legal matters. For this purpose, it would be useful for an occupational hygiene specialist inspector from the specialist group (SG) to attend from an early stage. Specialist inspectors from HSE's Technology Division, Dangerous Pathogens Section (TD6) have much experience of outbreak

investigations and can also provide useful assistance, including advice on matters concerning outbreak committees. If there is insufficient experience amongst both FOD/HID operational and SG inspectors on attending outbreak committees, TD6 should be informed of this at the start of an investigation and asked to advise and/or to attend an outbreak committee meeting(s) in person. Their assistance should normally be requested through the SG (see also [para 30](#)).

22 There is the potential for confusion over the application of different legislation in HSE-enforced premises, with overlapping responsibilities between HSE and LAs. The outbreak committee itself is not a legal entity and does not have its own separate powers. HSE inspectors may exercise their powers to enforce compliance with health and safety legislation and EHOs likewise in LA-enforced premises. Environmental health officers may be used to dealing with *legionella* matters under health and safety legislation, but their experience and approach can vary significantly from one authority to another, as they have a dual role, with additional responsibility for public health in all non-domestic premises (see [para 10](#)). Because of the more specific nature and greater powers of health and safety legislation, there appears to be a general acceptance amongst all authorities concerned that this should take precedence. However, it is important to note the situation as far as sampling is concerned, as indicated in [para 44](#). The outbreak committee will need to be aware of this at an early stage and of how it will affect the conduct of the investigation.

23 An outbreak of legionellosis in any one locality is a rare event, and it is probable that **both** HSE staff **and** other members of the outbreak committee will have little or no experience of an investigation. For this reason there will always be an initial learning phase, which will need to be as brief but as thorough as possible. Some of the matters that must be addressed at the first meeting are given in the appendix. HSE representatives should ensure that these are raised. Where possible, inspectors should make early contact (ie prior to the first meeting) with the PO to bring these to the PO's attention. It is recommended that inspectors give a copy of this OC to the PO. The OC may also benefit other members of the committee.

THE INVESTIGATION - HSE'S ROLE

Initial actions and considerations

24 Exceptionally there may be some circumstances where HSE's *Major incident response and investigation and policy procedures* ([Framework Document G](#)) need to be invoked in the case of a legionellosis outbreak. However, as it usually takes some time before its full extent becomes apparent, it will rarely be appropriate to consider this when an outbreak is first declared or at the stage of HSE's first involvement. Whether it will become so, will depend considerably on the particular circumstances and, as such, local FOD/HID management will need to be alert to the developing situation (see [Document G, part 2, section 4, para 3](#)). Management will need to inform the Executive should it reach a level of seriousness where the Executive need to make an appropriate decision, for example:

- (1) where a large number of cases is clearly associated with one HSE-enforced site; or
- (2) where the number of cases is fewer, but local public and political concern becomes a major factor.

If the Executive does invoke procedures, they should only apply to those HSE-enforced premises implicated as being the likely source. The major incident investigation team should not and cannot (in legal terms) take over the roles and functions of the outbreak committee as a whole.

25 At the start of involvement in an outbreak investigation, the SG should be informed as early as possible. In addition, because *legionella* has a high profile, it is important for HSE as a whole to monitor trends nationally and TD6 (Dangerous Pathogens Section), FOD Health Unit and Health Directorate (HD B1) should therefore also be informed. If HID premises are involved, HID Central Division should also be informed.

26 In practice, an investigation will proceed in 2 phases. First, there will be a control phase, in which the objective is to minimise the chance for further cases of infection, and all public bodies including HSE should be committed to this. The second phase will then comprise the investigation itself where HSE's objective's will differ but not conflict with those of the outbreak committee as a whole. Where there are a small number of installations within an outbreak zone there will be significant overlap between these phases.

27 Consideration should be given from the outset to:

- (1) who leads the investigation on behalf of HSE;
- (2) the numbers of inspectors likely to be required;
- (3) the level of specialist support;
- (4) the extent of support from WCOs.

28 The investigation should generally be led at band 2 level. Given that the source of the outbreak may be associated with a number of types of premises, it may not obviously fall within the responsibility of any one inspection group and consequently the lead inspector may need to be specifically appointed by the FOD head of division/operations. That inspector should decide on the composition of the investigation team and convene an initial meeting as soon as possible. HID may also have premises for which they have enforcement responsibilities in the outbreak zone and proper liaison should be carried out accordingly. In some circumstances they may need to take the lead.

29 The initial consideration for the number of inspectors required will primarily depend on the number of HSE-enforced premises in the outbreak zone. Subsequently, it will be governed by the speed at which the number of potential sources can be narrowed down. Inspectors may need to be drawn from across inspection groups and possibly HID as well, particularly as all need to be properly trained. A register, as referred to in [para 12](#), will facilitate rapid identification of the pool of trained inspectors.

30 Specialist support, at the first level, will be principally from the SG occupational hygiene (OH) section. Their early involvement is strongly advised, especially when control schemes are being examined, as the detail of these can be critical. Input from the SG mechanical engineering section may also be required on occasions. If a large SG specialist input is foreseen, it is advised that contingency arrangements are made for borrowing SG staff from other divisions. At the second level, assistance is available from TD6. The extent of their involvement will vary from one situation to another, ranging from verbal advice to helping form a prosecution case, but SG OH specialists should at least discuss matters with them at the start of the investigation, as this may assist in identifying key factors at an early stage. It is also advised that they brief them at suitable intervals thereafter, especially if complications develop. Any request for TD6 assistance should generally be routed through the SG.

31 Specialist group medical inspectors, although not having a specific role, can also usefully assist on account of their contacts within the field of public and environmental health, their knowledge of epidemiology and microbiology and by providing an input to the consideration of clinical aspects. It is recommended that the PI leading the investigation should at least discuss matters with them at the start, in case they can assist in any way.

32 Workplace contact officers can play a useful supporting role in gathering intelligence, particularly in obtaining lists of notified premises from LAs, searching FOCUS for recent contacts on *legionella* issues at premises in the outbreak zone and gathering information pertinent to identifying unnotified installations. They may also contact water treatment companies operating in the area for any useful intelligence they can provide.

33 An essential prerequisite for both control and investigation phases will be to obtain details of all notifiable installations on HSE-enforced premises within the outbreak zone from LAs. FOD now records such information on FOCUS for the purpose of assisting with routine inspections but at the time of the outbreak the most up to date records from the LA should be obtained, unless divisions have made decisions to maintain their own up to date records locally. There will also be installations that have not been notified and it will be important to locate these as rapidly as possible. The basis for this will be to identify those industrial processes and premises which need to dissipate heat, eg foundries, plastics manufacture, chemical manufacturing and processing, food processes which involve freezing or chilling. As plastics factories have been implicated in a number of outbreaks in recent years, particular efforts should be made to locate these.

34 When undertaking site visits, inspectors must take care to ensure any information necessary for prosecution or notice purposes is not destroyed or removed. Statements from key personnel should be taken as early as possible.

The control phase

35 The control phase may require intensive use of HSE field staff for a short duration. The outbreak committee may depend heavily on HSE enforcement powers at this stage. Environmental health officers will carry out a parallel exercise of this type in LA-enforced premises.

36 If the source of the outbreak is a water system other than a wet cooling system, there is a greater likelihood that this will be identified at an early stage, as there is likely to be a tighter clustering of cases both in terms of location and time. Nevertheless, when proceeding with the investigation of wet cooling systems as described below, inspectors should still be aware that infection could arise from any type of water system which poses a risk and may need to take action accordingly.

37 Inspectors will need to visit all HSE-enforced premises within the outbreak zone with notified installations and possible non-notified installations. Local knowledge based on types of premises and processes may assist prioritisation within the zone. Inspections should follow the same procedure as for routine inspections (see [OC 255/9](#)), but very rapid assessments and decisions on enforcement action will be needed. For those installations where the risk is significant, this may involve both the use of prohibition notices and powers under HSW Act s.20. Actions which inspectors may require the occupier to follow are given in Appendix 2 of the ACoP.

38 During the control phase, EHOs visiting to take samples are likely to encourage occupiers to 'shock dose' their systems. If HSE inspectors are unable to arrive on site until after this has happened, conditions may be markedly different and this could have implications in the investigation phase. The outbreak committee should anticipate this problem in advance but it will not always be possible to avoid it in every situation (see [para](#)

[46](#)). HSE inspectors should not attempt to significantly delay shock dosing to allow themselves time to visit the site. Where control is grossly inadequate, however, this should be apparent from other evidence and enforcement should not be hindered.

The investigation phase

39 At this stage, HSE's objectives will differ from those of the outbreak committee as a whole. HSE's activities will focus on compliance with the ACoP, while the latter will be concerned with public health issues. Where the outbreak committee requests a course of action from HSE, inspectors should be satisfied that this is justified in terms of the level of risk.

40 Those premises which were deemed to have posed a high risk in the control phase will need to be revisited and the risk assessed in more detail. It should be emphasised that due to the wide dispersal zone of drift from these installations (up to 2km radius) it may be difficult or even impossible to establish the true source of the outbreak. However, so long as it is ensured that the risk is properly controlled at all premises in an outbreak zone, the actual identification of the source becomes unnecessary as far as HSE is concerned. Inspectors must, therefore, make an effort to establish the proper evidence of risk based on compliance with the ACoP.

41 Inspectors should also be aware of the use of temporary cooling towers, which are not likely to be notified and may have been removed or dismantled before there is a chance to inspect or even identify them. If these have been used to provide additional cooling capacity at short notice, there is a greater likelihood that the risks have not been properly managed.

LEGIONELLA SAMPLING

42 The outbreak committee generally requires sampling for *legionella* for 2 reasons. The first is epidemiological where the aim is to identify the source. The second is to help assess the effectiveness of remedial action. HSE will have an interest in the results of both but does not need evidence of sampling to support a prosecution or any other enforcement action taken under health and safety legislation. This is because, as previously stated, HSE's aim is to assess the degree of compliance with the ACoP and *legionella* sampling is too unreliable for this purpose. It is, in any case, a requirement of FOD/HID's health and safety policy that inspectors **should not** get involved in sampling for *legionella* or in any other microbial testing. However, HSE should assist the outbreak committee in performing its sampling activities where it can (see [para 45](#)). Inspectors should note that the results of the occupier's own routine sampling - either *legionella* or microbial - especially the trends which these indicate, can be used to supplement other evidence which demonstrates the level of compliance with the ACoP.

43 Sampling during an outbreak has, in the past, generally been carried out by EHOs in their public health role, usually in liaison with the PHLS, who carry out the analysis for *legionella*. This is still likely to occur, but it is expected that in future there will be greater use of specialised PHLS personnel. This is because of a growing awareness amongst LAs of HSE's health and safety policy, making them reluctant to put their own staff at risk and a recognition that many EHOs have little or no experience of sampling themselves.

44 Environmental health officers have the powers under the EPA (see [para 10](#)) to carry out sampling on all (ie both HSE-enforced and LA-enforced) premises, but HSE inspectors have occasionally been called upon to authorise this under the HSW Act. The HSW Act does give inspectors the powers to allow the entry of other persons to premises and to collect evidence, including the taking of samples, but only when this is to support

action pursued under statutory provisions enforced by HSE. Since HSE does not require sampling results for this purpose, inspectors cannot legally authorise it, although they are unlikely to be challenged in practice. In strictly formal terms, therefore, EHOs should **both** authorise their own entry to HSE-enforced premises **and** take samples under their own powers granted under the EPA. If inspectors are asked to use their powers for *legionella* sampling, they should politely explain the reason for not doing so and then refer the matter to the outbreak committee.

45 This is a situation which can result in misunderstanding and give the impression that HSE is being unhelpful. This arises firstly because there is an expectation amongst other public authorities that HSE does require sampling and secondly, for premises where LAs have their own health and safety enforcement responsibility, EHOs may be used to entering and sampling under the HSW Act and therefore expect HSE to do likewise. The best way to avoid this is for the outbreak committee to address from the outset the question as to which legislation empowers sampling activities. HSE can demonstrate willingness to help in situations where local EHO staff lack sampling experience and no specialist assistance is otherwise available. Here specialist advice can be offered via SG and/or TD6 specialists, although they should still not get involved physically.

46 In some cases, samples may have already been taken prior to HSE involvement, but on occasions, HSE inspectors may be the first on site and should consider the implications of any urgent remedial action on the epidemiological investigation and whether this can be delayed long enough to allow EHOs to sample.

47 Where the outbreak committee also requires sampling to be carried out to determine the effectiveness of remedial action, HSE will be privy to this information, but any results should be regarded in the context of overall compliance with the ACoP and not taken in isolation as being the only indicator that the risk is under control. Inspectors may need to consult specialist advice (SG, TD6) on their interpretation, particularly as correct sampling procedure has a strong bearing on their validity. Once these matters have been considered, inspectors can then regard this as useful confirmation, or otherwise, that all is in order, but should not instigate it themselves for this purpose. Inspectors should note, however, that such sampling can often play an important role in the public perception of the efforts to control the outbreak.

48 The revised guidance given with the ACoP (third edition) now recommends that employers carry out quarterly *legionella* monitoring in cooling systems during routine use and more frequently in other circumstances. For a system which has been required to undergo emergency cleaning and disinfection as a consequence of the control and investigation of the outbreak, HSE inspectors should consider requiring the occupier not to recommission until dipslide counts are acceptable and *legionella* has been proved to be absent. This is in addition to any sampling carried out by the LA as described above. Thereafter, inspectors should consider requiring occupiers to increase the frequency of *legionella* sampling for a specified period after the outbreak as part of the scheme to ensure that the system is back under control.

49 HSE may be asked to contribute to the costs of any sampling exercise carried out on behalf of the outbreak committee. As sampling does not support the HSE role in the investigation, this should be refused.

INFORMATION TO THE PUBLIC

50 [OC 255/10](#) advises on information which can be given to the public during outbreaks.

SINGLE CASES IN HSE-ENFORCED PREMISES

51 HSE inspectors are more likely to be involved in the investigation of single cases than of outbreaks. Due to the seriousness which all cases of legionnaires' disease are regarded, inspectors should now routinely inform TD6 of all single cases notified to them, as well as outbreaks, indicating whether or not a decision has been made to investigate. Again, as with outbreaks, inspectors who think that TD6 assistance is necessary, should request it through the SG.

Selection of cases of legionellosis for investigation

52 As stated in para 14, cases of legionellosis are reportable under RIDDOR, but only those which relate to 'work on or near cooling systems' or 'work on hot water service systems' located in the workplace. Cases arising in FOD-enforced premises from these systems meet the criteria for selection under the FOD *Incident selection procedure* (ISP) ([WI 1, Appendix 1, \(A\) 5](#) 'Occupational diseases'). In practice, HSE may receive information through a variety of routes, eg from the CCDC, via the LA environmental health department, the PHLS, or relatives and acquaintances of the infected person. Where sufficient detailed information of an incident is received which has not previously been reported under RIDDOR then it should be redirected to the ICC as set out in the [ICC interface procedure, WI 1](#). For cases arising in HID LD premises, the selection criteria in the HID LD Inspection Manual Chapter 5 should be applied, which in practice would usually mean that most cases should be investigated.

53 Non-RIDDOR notifiable cases, which encompass both those which may be difficult to attribute to any particular source as well as those associated with any other water systems, should still be considered for investigation using [ISP, WI 1, Appendix 1, \(B\)](#) criteria - 'Circumstances requiring judgement as to seriousness'. For all such cases, inspectors should scrutinise the reasons for suspecting an occupational cause, taking into account information on recent out-of-work activities of the infected person including travel abroad. However, even where these are not well founded, inspectors should still apply the incident selection criteria to determine whether to investigate based on consideration of the level of public concern. If inspectors decide not to investigate, the procedure requires a band 1 to approve this decision if it is made on account of inadequate resources.

54 For both RIDDOR and non-RIDDOR cases, once a decision has been made to carry out an investigation, inspectors need to carefully consider its scope and extent. In most cases, they should inspect the workplace(s) posing the most likely source of infection, with a view to examining **all** water systems which could pose a risk, not just wet cooling systems. Depending on the findings of this initial investigation, a decision may then be necessary on whether to extend this to other premises in the vicinity. Considered judgements are needed here, balancing local public concern against a realistic assessment of the risk of further infection, which will depend on factors such as the type of industries, the density of both population and premises, and the presence of susceptible populations. Inspectors will also need to consider other operational demands and should be mindful of overstressing their resources in circumstances where it may be unlikely that the source will be identified. In general, any extension of the investigation should be restricted to wet cooling systems only, as other water systems are very unlikely to disperse infected aerosol over an area beyond their immediate vicinity. These may also need to include any such installations in the vicinity of the infected person's home.

55 As with outbreaks, EHOs will be involved if LA-enforced premises are also suspected of being a potential source, but even if this is not the case they may still have an interest from the public health angle. HSE should liaise with the LA (preferably initially via the ELO) over this, and enquire if joint visiting is desired. If the issue of sampling arises, inspectors should follow the same policy as in [paras 42-49](#). If no HSE premises are involved, LAs may still wish to enlist the assistance of an HSE specialist. In theory, this should be routed through the ELO to the SG, but if a request is made directly to TD6, the latter should inform and discuss with the appropriate FOD/HID office.

ENFORCEMENT

56 Any enforcement action should now be informed by the Enforcement Management Model (EMM) Operational Version 2. The following paragraphs on enforcement and that in other OCs referred to are based on this version.

57 Where there are clear failures to comply with relevant legislation, inspectors will need to place a firm emphasis on enforcement action:

- (1) in order to control the risk of further cases of infection;
- (2) to allay public concern; and
- (3) to ensure future compliance.

At the initial stages, this will principally involve issuing notices under COSHH and, for management issues, under MHSWR. Inspectors should refer to [OC 255/9](#) and [OC 255/11](#) for guidance on the level of enforcement required for specific aspects of non-compliance, noting that where they encounter particularly poor conditions or there has been a history of non-compliance, they may need to follow up with prosecutions. Inspectors should consider prosecution for: failure to notify under the NCTEC Regulations; inadequate risk assessments and management systems; the presence of significant contamination and/or the failure to control drift. They should pursue prosecution whether or not installation(s) are thought to be the source of the outbreak. They must also consider the option of proceeding on indictment.

58 It will be necessary to ensure that any action following an outbreak is coordinated between all the relevant agencies. However, inspectors should take enforcement action where required, although the views and actions of the other parties should be taken into account. Inspectors will need to be satisfied that the relevant demarcation of responsibilities for investigation, enforcement and provision of information to the employer, work force, the public and media have been agreed by the outbreak committee. Where other agencies take responsibility for communication with the media, inspectors must ensure that those agencies:

- (1) are made aware of any statutory restrictions on disclosure of information; and
- (2) do not disclose information about HSE-enforced premises without prior consultation.

Water treatment companies

59 Inspectors should also consider the need to take action against water treatment or other contractors and suppliers whose negligence or malpractice may have contributed to occupiers failing to comply with their legal duties. Actions under HSW Act s.3 and s.6 will be particularly relevant here. The revised edition of the ACoP strengthened the legal duties required of these and other suppliers/manufacturers of materials and equipment in relation to the control of *legionella* (see [OC 255/11](#)).

FOCUS RECORDING

60 All FOCUS contacts made during an outbreak or investigation of a single case should be linked by the same investigation number. Beyond that there is no formal requirement for recording although local decisions can be made on what information contact records should contain.

61 For very large sites, it is advantageous to be able to easily retrieve contact reports concerning *legionella* issues which have arisen during past inspections, as these may provide clues as to what an investigation should prioritise for those sites. The simplest way to do this is to ensure that a keyword is inserted in each contact report. The obvious keyword to use is '*legionella*'.

CANCELLATION OF INSTRUCTIONS

62 OC 255/8 - **cancel** and **destroy**.

Date first issued: 23 November 2001

(220/FOD/1018/1998)

Disc: J:\Editors\intranet\ocfiles\200-299\255_12.lwp

APPENDIX

(paras 20 and 23)

ROLES AND RESPONSIBILITIES OF THE OUTBREAK COMMITTEE

1 The following are some of the issues which **must** be agreed at the first meeting of the outbreak committee:

- (1) The purpose of the committee (eg to prevent further cases; identify source of outbreak; prepare a report of investigation).
- (2) The roles of each agency, the legal/enforcement approach, ie which legislation takes precedence and the criteria for controlling the risks.
- (3) Demarcation of responsibility for investigation particularly with respect to water sampling and analysis.
- (4) Routes for exchange of information between committee members (such as locations of notified and non-notified cooling towers/ evaporative condensers; intelligence from patients; results of water and biological sampling; details of enforcement actions).
- (5) Provision of information to general practitioners, hospitals, employers, employees, the general public and the media in and around the affected area about legionnaires' disease and the work of the outbreak committee.
- (6) Liaison with the media, including press releases and interviews.

(7) Arrangements for the release of results of investigations to employers, employees, members of the public and the media (taking into account difficulties with disclosure of information).

(8) Criteria for declaring an end to the outbreak.

(9) Interim and/or final reports.

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